DOCUMENT RESUME

ED 081 033 CS 500 382

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TITLE Analysis of Relational Communication in Dyads: New Measurement Procedures.
PUB DATE Apr 73
NOTE 40p.; Paper presented at the Annual Conference of the International Communication Association (Montreal, April 25-29, 1973)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Codification; *Communication (Thought Transfer); *Human Relations; *Individual Power; *Information Theory; Interaction; *Interaction Process Analysis; Interpersonal Relationship; Models; Nonverbal Communication; Structural Analysis; Systems Concepts; Verbal Communication
IDENTIFIERS Dyadic Interaction; *Relational Communication

ABSTRACT

Relational communication refers to the control or dominance aspects of message exchange in dyads--distinguishing it from the report or referential aspects of communication. In relational communicational analysis, messages as transactions are emphasized; major theoretical concepts which emerge are symmetry, transitoriness, and complementarity of control. Within the context of a brief review of existing interaction analysis techniques, new measurement procedures can be developed which capture both the control and time-varying nature of dyadic interaction. The first step yields a code based on the grammatical format of each sequential utterance (from a speaker). The second step gives a translation of each message format into a "control code." Control codes, when translated into "transactional codes," reveal the nature of manipulative communicational exchanges. The methodology thus developed deals with communication in dyads. Further work is required in the case of triadic and larger communicational relationships. (Author/CH)

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Analysis of Relational Communication in Dyads:

New Measurement Procedures

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June, 1973

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ABSTRACT

Analysis of Relational Communication in Dyads:
New Measurement Procedures

Relational communication refers to the control or dominance aspects of message exchange in dyads, as distinct from an emphasis on the report or referential aspects of communication. In relational communication analysis, the focus is on messages as transactions, and the major theoretic concepts which emerge in this analysis are symmetry, transitory, and complementarity of control. This paper contains a brief review (and critique) of existing interaction analysis techniques, followed by a detailed discussion of new measurement procedures that capture both the control and processual (time-varying) nature of dyadic interaction. The first step in these procedures yields a code (by speaker) based on the grammatical format of each sequential utterance. The second step yields a translation of each message format into a control code, based on the relationship between the message and its immediate predecessor. These control codes are next translated into transactional codes, which can then be analyzed in terms of the three major theoretic concepts. These measurement procedures require minimal subjective judgment, particularly at the initial coding level. The paper concludes with a discussion of the ways we are attempting to operationalize major "themes" or patterns of control in lengthy, ongoing dyadic exchanges.

This paper describes recently developed procedures for coding and analyzing the relational and processual aspects of interpersonal communication systems. Relational communication refers to the control aspects of message exchange--those elements in message exchange by which interactors reciprocally define the nature of their relative "position" or dominance in their interaction. In popular terms, the notion of being "one-up" or "one-down" indicates two examples of relational control. The theoretic concepts of symmetry, transitory, and complementarity reflect basic types of relational control, and are defined in terms of the similarities or differences in control maneuvers appearing in an interaction; more precise definitions will be given below.

An emphasis on the processual aspect of interpersonal communication is equally important in this research, since our goal is to develop operational measures of relational control "patterns" in ongoing interaction systems. In achieving this goal, methodological problems arise in the analysis of sequentially linked messages that differ from those encountered in developing analysis schemes for coding discrete interaction events. We will indicate these problems and discuss how they may be solved.

At the conceptual level, the major inputs to relational control analysis come from the work of Bateson (1936), Jackson (1959, 1965). Haley (1963) and Watzlawick, et. al., (1967). At the operational level, the most significant work has been provided by Sluzki and Beavin (1965).

Relational communication analysis requires a perspective that differs from the monadic or individual-difference orientation that dominates existing analysis techniques. Relational analysis focuses on communication properties that exist only at the dyadic system level; relational variables do not lie within individual interactors, but rather exist between them. The measurements derived from this analysis refer to emergent properties of joint communicative behaviors and have no counterpart in the properties of individuals or single messages. With the present scheme, the transaction--the exchange of paired sequential messages over time--becomes the basic unit of analysis. We will attempt to demonstrate in this paper that transactional analysis requires a different conceptual and methodological approach than is provided by existing interaction schemes.

The purpose of this paper, then, is to present a procedure for coding and analyzing the relational control aspects of communication, using a transactional and process-oriented approach. The paper is divided into three parts:
(1) a brief overview (and critique) of selected existing interaction techniques; (2) a detailed outline of the relational procedures, including a discussion of how they resolve important problems; and (3) a commentary on the current and proposed extensions of these procedures.

A Review of Selected Interaction Analysis Techniques

A large number of methods for describing interaction processes have been devised since the pioneering work exemplified by Carr

(1929) and Thomas, et. al. (1933). These methods vary along at least six important dimensions:

1. Number of categories utilized (from simple two-category schemes to highly complex, multi-categorical ones)

2. Degree of inference by the observer (from minimal inference about purpose, intent, function, etc., to highly inferential descriptions)

3. Breadth of applicability (from very specific types of communication situations to very broad applicability)

4. Message exchange focus (from an emphasis on the content or substantive aspects of message exchange to a concern with non-content dimensions, e.g., time allocation)

5. Purpose or consequence of the interaction (from a focus on the sender's intent to the group function of the message)

6. Unit of analysis (from analysis of single messages to a focus on sequentially ordered messages reflecting the processual aspects of the interaction)

Eight observational systems have been selected for review, from among the larger set available to researchers.[1] These eight are applicable to many interaction situations, and are not overly specific in their focus on communication processes. Further they are not necessarily intended for a therapeutic population, and they all deal with verbal behavior. The eight systems give a reasonably representative "sample" of the communication variables that have been studied by such techniques over the past 25 years. These systems are grouped below into three major types of orientation: those that focus on non-content aspects of message exchange, on specific content aspects, and on relational dimensions.

Non-Content Orientation

The classification system of Chapple (1940) focusses on the time element in interaction, and is a clear example of the non-content type of analysis scheme. This scheme requires observation of time intervals or "frames" that are separated into two categories--action (linguistic utterances) and inaction (silence) between interactors. The number and length of action units are tabulated for each individual, and from this fairly uncomplicated procedure a variety of time activity measures can be derived. These include the length of interaction, the number and length of each participant's interaction, and the relative number and length of interaction between the action/inaction categories, and between the participants.

Chapple (1949) describes several interaction concepts (such as tempo, activity, initiation, directionality, etc.) that can be derived solely on the basis of observing the distribution of action/inaction by a dyad over time.

Chapple's scheme has clear advantages in its relative simplicity, and in its potential for yielding highly reliable observation. And, using only the time dimension of interaction, it provides several indices that are useful in describing message exchange. The scheme's main shortcoming, however, is the limited amount of information it gives about the total communication process.

Content Orientation

Focusing on the content or referential aspects of messages, Steinzor (1949) developed a rather complicated classification system to analyze the intent of verbal behavior in face-to-face

groups. He uses 18 categories to describe the communication intent of the actor, along with three sub-categories for each major category to show the direction of the intent--whether it is toward the self, toward the group, or toward the issue. These categories are:

1. activate and originate
2. structure and delimit
3. diagnose by labelling
4. evaluate
5. analyze and explore
6. express and give information
7. seek information
8. clarify confusion
9. define
10. offer solution
11. conciliate
12. understand and reflect
13. give support
14. seek support
15. oppose and attack
16. show deference
17. conform
18. entertain

A 19th category, "miscellaneous," is used to code all unclassifiable statements.

The complexity and non-ordered potpouri aspects of these categories can cause serious problems in coding. There is no apparent unifying notion underlying the set of communication variables. The methodological approach of coding the "intention" of the speaker's message is highly inferential, with low potential for reliability. Further, this system does not specifically take into account the sequential aspects of the verbal behavior being analyzed.

Borke (1967) also offers a classification system[2] that is based on categorizing each message according to the "probable intent" of the person initiating it. Her approach, however, has more of a theoretical guide than Steinzor's; Borke's system is

embedded in Horney's (1945) broad theoretical scheme of classifying interpersonal behavior as "going toward," "going against," or "going away from" others. These three interpersonal styles of relating are broken into primary and secondary mode categories.[3] Both the initiator and the recipient of the interpersonal message are recorded in each exchange. The categories are given below:

I. Goes toward
   A. Contributes
      1. offers information
      2. seeks information
      3. entertains
      4. miscellaneous
   B. Supports
      1. actively promotes cause
      2. shows concern
   C. Petitions
      1. seeks support
      2. seeks attention
      3. seeks direct gratification
   D. Directs
      1. organizes
      2. behaves strategically
      3. instructs
   E. Accepts from others
      1. accepts support
      2. accepts other's point of view

II. Goes against other
   A. Resists
      1. ignores
      2. opposes
   B. Attacks
      1. behaves provocatively
      2. attacks directly

III. Goes away from other
   A. Retreats
      1. evades
      2. withdraws physically

Borke's system provides both profile and sequential indices of communication acts. From these measures, a number of comparisons are possible, either for the total interacting unit or for each participant. The most general variable is a summarative "going toward, against, or away" style of relating to other members At

the primary and secondary mode level, the proportion of communication events in each category can be determined, and the proportion of communication initiated and received by each member is available (by total or by individual category). The interaction sequence can be traced by speaker and/or category.

Carter, et al. (1951), in their studies of leadership, devised a 53-category system for classifying verbal acts according to their function in the group process (as seen by an observer). There are seven main category groupings, with from 3 to 15 subcategories. The main category headings are:

1. Shows personal feelings
2. Proposes and initiates action
3. Disagrees and argues
4. Leader role in carrying out action
5. Follower and worker role in carrying out action
6. Abortive or nonproductive behavior
7. Miscellaneous

Except for the first main category (dealing with personal feelings), coding reliability is enhanced by the specificity of the subcategories in the other main categories. The array of 53 categories allows a large amount of specific information be be taken into account, but this also produces a very complex and cumbersome system to implement.

Bales (1950) produced a category scheme concerned with interaction content, but one with higher classification objectivity than Steinzor's and with more conceptual structure than Carter's. Perhaps the longevity of Bales' scheme, Interaction Process Analysis[4], is indicative of this.

The emphasis of Bale's observational scheme is more on the group function of messages than on individual intent. The

conceptual framework is based on four main problems confronted by a social system: adaptation to outside influences, instrumental control over task, expression of feeling, and maintenance of integration. Adaptation and instrumental control are considered to be basically task oriented and are handled primarily by the expression of questions and answers, opinions and suggestions. Expression of feelings and maintenance of integration are considered to be basically socio-emotional oriented and are dealt with primarily by the expression of positive and negative reactions. The observation list for coding behavior follows:

1. Shows solidarity
2. Shows tension release
3. Agrees
4. Gives suggestion
5. Gives opinion
6. Gives orientation
7. Asks for orientation
8. Asks for opinion
9. Asks for suggestion
10. Disagrees
11. Show tension
12. Shows antagonism

The major variables imposed upon these categories are: orientation (6,7), evaluation (5,8), control (4,9), positive reaction (1,2,3), and negative reaction (10,11,12). The main measures of message frequency and flow available from the coding scheme are: a distribution of acts by category and by combined categories, a who-to-whom matrix by category and total, and a ratio of instrumental acts to socio-emotional acts. A phase analysis of the distribution of acts over time has been used by Bales and others, and is a step forward in the study of the time-ordered aspects of interaction.

Soskin and John's (1963) analysis of talk behavior included four kinds of approaches to the data: (1) ecological, a description of the behavior setting, (2) structural, a description of the amount, frequency and duration of talking behavior, (3) functional, a description of the major classes of verbal acts in terms of their function, and (4) dynamic, a description of the emotional state of the speaker.[5] Of particular concern to our interest here are the structural and functional categories for characterizing verbal behavior.

The three main variables under the structural analysis are the (1) absolute and relative amount of talking, (2) number and proportion of utterances exchanged, and (3) distribution and duration of speeches.

The basis of Soskin and John's functional analysis rests on the distinction they make between the informational and relational functions of talk. The informational function consists of objective statements about one's self and one's world. "Informational messages are those which develop or report what are thought to be facts; they identify, classify, analyze, organize, etc., and are primarily information transfer statements" (1963, p. 253). Relational talk includes statements "by which a speaker manages his interpersonal relations (1963, p. 253) by direct specification of preference, or by indirectly providing information about his present state which can be taken into account and adjusted to by the listener.

Six types of statements, given below, have been distinguished by Soskin and John:

I. Informational messages
   A. Structiones: objective informational statements

II. Relational messages
  B. Signones: subjective messages of physical or psychological state of speaker
  C. Metrones: evaluate, interpretative statements
  D. Regones: regulative statements, both giving restrictions and opportunities
III. Quasi-relational messages
  E. Expressive: utterances to discharge immediately experienced tension
  F. Excogitative: "thinking out loud" statements

Using these categories, the usual profile comparisons can be made, as well as comparisons of the sequential distribution of messages.

Relational Orientation

While a content-oriented analysis is concerned with what is being said, a relational-oriented analysis is concerned with how it is being said. This basic distinction was made by Ruesch and Bateson (1951) in their discussion of the report and command aspects of messages. They postulated that every message has two levels of meaning: (1) a report or content aspect, which conveys information, and (2) a command or relational aspect, which defines the nature of the relationship between the interactors.

Focusing on the command aspect, two principal types of transactions have been defined on the basis of relational control. Symmetry refers to the interchange of equivalent control messages, while complementarity refers to the interchange of maximally dissimilar control messages. From these beginnings, the terminology available for describing relational communication has been increasing, but operational definitions have lagged behind. Sluzki and Beavin (1965) were the first investigators to deal with the operationalization of these two types.

Sluzki and Beavin operationally define symmetry and complementarity in terms of "the structural resemblance, or lack of resemblance (respectively), of the reciprocal communication behaviors of the members of a dyadic system" (1965, p. 323). Symmetrical interaction is characterized by "equality and the minimization of difference, while complementary interaction is based on the maximization of difference" (Watzlawick, et al., 1967, p. 69). In a symmetrical transaction or relationship, one interactor behaves toward the other as the other behaves toward him. There is an equivalence of conduct between the two individuals: there is a symmetry or relational control. In a complementary transaction, however, the interactors' behaviors are maximally differentiated. The control definition of the relationship offered by one interactor is accepted by the other.[6]

A distinctive aspect of relational analysis is that it necessitates at least a dyadic level of analysis, in contrast to the more predominant monadic analyses. Whether the transaction is symmetrical or complementary, both interactors must participate in the definition of the relationship. Thus, the smallest unit of a relational analysis is a paired exchange of two messages.[7]

Examples of symmetrical and complementary transactions given by Sluzki and Beavin are:

giving/taking instruction=complementary (giving=one-up, taking=one-down)

asking/answering=complementary (asking=one-down, answering=one-up)

asserting/agreeing=complementary (asserting=one-up, agreeing=one-down)

referential statement/referential statement=symmetrical

agreeing/agreeing=symmetrical

giving instructions/countering with instructions=symmetrical
(Sluzki and Beavin, 1965, p. 326)

In this system, it is important to note that the designation of transaction type is based on both the grammatical form of the statement (e.g., question, assertion) and the response style (e.g., agreeing, disagreeing). Sluzki and Beavin provide a beginning scheme for categorizing message control and transactional types, but not a completed coding system.

In the research program undertaken by the present authors, the first attempt to further operationalize the concepts of symmetry and complementarity was carried out by Mark (1970). He uses a three-digit code to designate each message; the first digit indicates the speaker, the second indicates the grammatical form of the speech, and the third indicates the meta-communication aspect of the speech, relative to the message that preceded it. The code categories are given below.

1st digit code:	2nd digit code:	3rd digit code:
1 = 1st speaker	1 = question	1 = agreement
2 = 2nd speaker	2 = assertion	2 = disagreement
	3 = instruction	3 = extension
	4 = orders	4 = answer
	5 = talking over	5 = disconfirmation
	6 = assertion and question	6 = topic change
	7 = question and assertion	7 = agreement and extension
	8 = other	8 = disagreement and extension
	9 = laughter	9 = other
		0 = laughter

For example, the code 222 indicates that the second speaker made an assertion that was in disagreement with the message that preceded it.

Specific coding rules are outlined by Mark (1970, pp. 47-48) for designating the transactional characteristics of paired messages. However, the nine relational categories he presents include an inconsistent combination of message values with transactional values.[8]

Nevertheless, with this scheme, the usual time measurements of amount, frequency and distribution of talking and non-talking are available for each participant and for the total discussion. This coding system allows for frequency counts by individual, or by combined categories. It also permits a sequential analysis of code categories, and a beginning relational analysis based on successively paired message exchanges.

An Overview of Interaction Analysis Techniques

The eight coding systems reviewed here have varied in a number of ways, not only in the more specific aspects concerning the number and definitions of code categories, but in their basic approach to the observation and codification of ongoing communicative acts. Most noticeable is the prevalence of single-message coding systems and the lack of processual concerns.

These coding systems vary between the multi-categorical scheme developed by Carter, et al. (which categorizes messages on detailed substantive content), to the relatively content-free procedures of Chapple (dealing with time allocation) to Mark's system for dealing with relational dimensions. The bulk of the techniques, however, have a strong emphasis on the report or content aspects of interpersonal interaction, rather than on the relational aspects.

The coding perspective of the systems also differ in their level of analysis. At the monadic level, the methods of Steinzor and Borke are examples of classifying communication acts on the basis of the speaker's intent, while the methods of Bales, and of Soskin and John, are examples of classifying messages on the basis of function of the act for the group. Most of the systems have not attempted a transactional, i.e., systems level, analysis of communication acts. These aspects of message exchange are the prime considerations in the analysis procedures of Sluzki and Beavin, and Mark, and in the coding system to be presented in this paper. The review of existing interaction systems indicates that a relational approach, as opposed to a content approach, is a recent but growing perspective in the study of communication.

Relational Communication Analysis Procedures

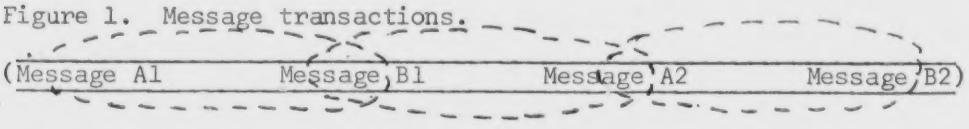
All interaction involves an ongoing reciprocal definition of relationships. The relation-defining aspect of communication is the focal point in the development of the present transactional level coding system.[9] This analysis focuses on message sequences, rather than on individual message units; on indexing relational control rather than the content of messages; and on mapping transactional patterns as they unfold over time.

The Coding System

Using Sluzki and Beavin's definition, a message is defined as each verbal intervention by participants in a dialogue. A message may be a single utterance, or a flow of continuing utterances. Each message is treated as both a response to the preceding message,

and a stimulus for the message that follows. In a series of two-message exchanges, it is the second message that confirms or modifies the definition of control offered by the first message. The "negotiation" of the nature of the transaction is thus completed by the second message, which in turn, presents the stimulus definition for the following transaction. See Figure 1, for a representation of the continual "opening" and "closing" of relational definitions in an ongoing exchange of messages between persons A and B.

Figure 1. Message transactions.



Taking Sluzki and Beavin's lead that relational control is based on both the grammatical form of the message and the response style of the message, a coding scheme was devised to reflect these aspects for each message. A three-digit designation is used to code each utterance. The first digit designates the speaker. The second digit refers to the grammatical form of the message, and the third digit indicates the meta-communication response of the message relative to the statement that came before it.

The code categories are presented below:

1st Digit:	2nd Digit:	3rd Digit:
1 = Speaker A	1 = Assertion	1 = Support
2 = Speaker B	2 = Question	2 = Nonsupport
	3 = Talk-over	3 = Extension
	4 = Noncomplete	4 = Answer
	5 = Other	5 = Instruction
		6 = Order
		7 = Disconfirmation
		8 = Topic change
		9 = Initiation-termination
		0 = Other

The coding system involves several progressive steps. In the following sections of the paper, procedures will be presented for categorizing messages, assigning control directions to these categories and defining the transactional types that result from a combination of message control directions.

Message Codes

In the present three-digit coding system, the first digit code refers to the interactors and allows the flow of messages to be accounted for by speaker. Under the second digit, the code categories refer to the format of the message. These category decisions involve very little inference on the part of the coder. An assertion is any completed referential statement, either declarative or imperative in form. A question is any speech which takes an interrogative grammatical form.

The remaining categories under the second digit are not grammatical forms of speech per se, but are descriptive of the format of a message. A talk-over refers to an interruptive manner of entering an on-going utterance by the other actor. The normative communicative procedure is to alternate speeches, either at the end of a completed speech or at a pause in the exchange. Any distinguishable verbal intervention made while the other actor is talking is defined as a talk-over. It is considered successful if the first speaker "relinquishes the floor" when the second speaker starts speaking, and unsuccessful if the first speaker continues talking despite the second speaker's attempt to interrupt. Whether a talk-over is successful or unsuccessful, both types of messages indicate attempts to control.

The noncomplete category refers to any utterance that is initiated but not expressed in a completed format. Some examples of noncompletes are: "Let's see, that was in...," "What I thought was...," etc. The category other refers to verbal utterances that are unclassifiable as to their form.

The third digit code categories refer to the response mode of the speech. These classifications involve more inference than the previous categories. However, careful delineation of the meaning of each of these categories lowers the subjectivity of the coding.

The support category refers to both the giving and seeking of agreement, assistance, acceptance and approval.. The nonsupport code is used to denote disagreement, rejection, demands and challenges.

The extension code is used to classify a message that continues the flow or theme of the preceding message. Included under this category is a noncommittal response to a question. The answer code is reserved for a response to a question which has substance and/or commitment. A non-committal response such as "I don't know" to a question is coded as an extension, while a definitive response, such as "It was June 9th," is coded as an answer since the two types of responses have different control defining natures.

The categories of instruction and order both denote a regulative response, but of different intensities. An instruction is a suggestive and evaluative statement which is often accompanied with qualifications and clarification, while an order is an unqualified command with little or no explanation. For example, "I think it's time for you to go to bed now because you have school tomorrow," is an instruction. "Go to bed," is an order.

Disconfirmation and topic change are also differentiated in the present analysis. Both categories refer to a response switch or noncontinuance but a "...disconfirmation occurs after a statement has been made which demands a response to it by the other individual and he does not respond to the demand...", while a topic change occurs with the "...introduction of a new idea after discussion of (another topic)..." (Mark, 1970, p. 44). Thus, a disconfirmation refers to a message exchange in which one interactor requests a response and the other interactor ignores the request. For example, a response like, "It's cloudy, might rain." to the question, "What should we do about Johnny?" is considered a disconfirmation. A topic change refers to an exchange in which the second message has no theme in common with the first message, but also that no response commonality was requested by the first message. For example, "Where is tonight's paper?" in response to the comment "The baby is learning to walk." is considered a topic change.

The initiation-termination code is used to denote a message that either begins, or attempts to end, an interaction. The category other is used if the response mode is unclear or unclassifiable.[10]

To summarize, each utterance of an interaction is assigned a three-digit code. The first digit denotes the speaker, the second the form of the speech, and the third the response mode of the speech. In this manner, any two-person communication exchange can be represented by a series of sequentially ordered three-digit codes. Those coding procedures have been utilized in a study of

interaction among 65 married couples and were found to yield reliability levels ranging from 1.00 to .68, across four topics averaging 10 minutes discussion each; the overall reliability average was .86 (Ericson, 1972; Rogers, 1972).

Control Codes

Thus far, only the first step in measuring relational transactions has been outlined. The second requires a translation of the message codes to a control dimension. Based on the combined control-defining nature of grammatical form and response mode, a message is given one of three control directions. These assignments are made in terms of whether a message is (a) a movement toward gaining control of the exchange, which is designated as one-up (↑), (b) a movement toward yielding control by seeking or accepting control of the other, which is designated as one-down (↓), or (c) a movement toward neutralizing control, which has a leveling effect and is designated as one-across (→).[11]

Code categories representing message forms and response modes that are viewed as control maneuvers toward one-up are: Nonsupport responses (including questions demanding an answer), answers with substance, instructions, orders, disconfirmations, topic changes, complete statements of initiation and termination, and all talk-overs except supportive talk-overs and those with unclassifiable response modes.

The one-down code categories are: all support responses, including questions that seek supportive responses, noncomplete phrases that seek others to take control, supportive talk-overs

and questions that continue the dialogue (extension) or have uncodable responses (other).

Neutralizing, or control-leveling categories are viewed as carrying an interaction along with a minimized effort at controlling the relationship. Code categories that are seen as one-across maneuvers are assertions of extension, utterances with uncodable response modes, noncomplete phrases and "other" (unclassifiable message forms) that are extensions. This includes questions (i.e., the "empty" answer response). Also included in the one-across category are noncompletes that initiate or terminate and that have unclear response modes (i.e., have third digit codes of "other"), and finally, utterances with both uncodable form and response modes (i.e., "other-other").

The following rules give the direction of control for second and third digit message code combinations. There are a total of 50 combinations.

Second and Third Digit Code Combinations		Type of Control	
12, 14, 15, 16, 17, 18, 19	=	one-up	↑
11	=	one-down	↓
13, 10	=	one-across	→
22, 24, 25, 26, 27, 28, 29	=	one-up	↑
21, 23, 20	=	one-down	↓
32, 33, 34, 35, 36, 37, 38	=	one-up	↑
31, 30	=	one-down	↓
42, 44, 45, 46, 47, 48	=	one-up	↑
41		one-down	↓
43, 49, 40	=	one-across	→
52, 54, 55, 56, 57, 58, 59	=	one-up	↑
51	=	one-down	↓
53, 50	=	one-across	→

Figure 2 presents, in matrix form, the results of combining various second and third digit codes to obtain the three central directions.

Figure 2. Message type and control direction.

		1 Support	2 Nonsupport	3 Extension	4 Answer	5 Instruction	6 Order	7 Disconfirmation	8 Topic Change	9 Initiates-terminates	0 Other
Assertion	1	↓	↑	→	↑	↑	↑	↑	↑	↑	→
Question	2	↓	↑	↓	↑	↑	↑	↑	↑	↑	↓
Talk-over	3	↓	↑	↑	↑	↑	↑	↑	↑	↑	↓
Noncomplete	4	↓	↑	→	↑	↑	↑	↑	↑	→	→
Other	5	↓	↑	→	↑	↑	↑	↑	↑	↑	→

To briefly illustrate the relational coding rules, consider a message that is an assertion of nonsupport. It is coded as a _12, which designates a one-up (↑) movement. (The _ refers to the undesignated speaker.) An assertive message that expresses support for a previous message is coded as a _11, which is a one-down (↓) movement. An assertion which extends the dialogue is coded as a _13 and represents a one-across (→) movement.[12]

Transaction Codes

The preceding explanation of message codes allows us to now move to the transactional coding procedure necessary for a relational analysis. By combining the control direction of individual messages into pairs of sequential exchanges, it is possible to

operationalize transactions by the degree of control symmetry for each exchange as it "unfolds." For illustration, a sample discussion is shown below, with message codes, control codes, and transaction codes.

		Message Code	Control Code	Transaction Code
Wife:	We don't do anything together anymore.	119	↑	↑↓
Husband:	What do you mean?	223	↓	↓↑
Wife:	Well, as a family we don't do very much.	114	↑	↑→
Husband:	Oh, I don't know.	213	→	→↓
Wife:	Don't you feel I do the major portion of the disciplining the children?	121	↓	↓↑
Husband:	The time we're together you don't.	214	↑	↑↑
Wife:	Well, just for the record, I have to disagree.	112	↑	↑↑
Husband:	Well, just for the record, you're wrong.	212	↑	↑↑
Wife:	Well then, we completely disagree	119	↑	

The nine transactional types that result from the combination of the three directional possibilities with each other are given in the following matrix:

Figure 3. Matrix of transactional types.

	one-up	one-down	one-across
one-up	1 ↑↑	4 ↑↓	7 ↑→
one-down	2 ↓↑	5 ↓↓	8 ↓→
one-across	3 →↑	6 →↓	9 →→

The symmetrical transactions--paired messages with similar control directions--are found in cells 1, 5 and 9. An advantage of the present coding system is its ability to identify, by direction, three different kinds of symmetry, rather than leave the concept unspecified as in previous systems. We refer to ↑↑ (cell 1) as competitive summetry, ↓↓ (cell 5) as submissive symmetry, and →→ (cell 9) as neutralized symmetry.

Cells 2 and 4 represent the two forms of complementarity: one-down/one-up, and one-up/one-down. Complementary transactions refer to message pairs that are maximally dissimilar in their control direction, as we have noted previously.

Other investigators have conceptualized the control defining nature of a message as having only two directions, either one-up or one-down, and transactional units as being either symmetrical or complementary. The addition of a third direction, one-across, increases the sensitivity of the control measure by generating an additional type of symmetry and a third type of transactional exchange--the transitory category.

Transitory transactions refer to paired messages in which one of the messages is one-across. Cells 3, 6, 7, and 8 represent the four transitory transactional types. Cells 3 and 6 refer, respectively, to neutralized toward one-up, and neutralized toward one-down, control movements. Cells 7 and 8 refer, respectively, to movements of one-up toward neutralized control.

The three types of symmetry, the four types of transitory and the two types of complementary offer a more complete set of relational patterns by which to describe on-going interactions than have previously been available.

Relational Communication Analysis Levels

Several levels of analysis are possible, based on the coding procedures outlined. At the monadic level, it is still possible to obtain--by actor and overall--absolute and relative measures of length of talk, frequency of talk, type of grammatical form, and type of message response. Frequencies and ratios of one-up, one-down, and one-across message control can also be assessed by individual and overall. Thus these procedures do not require that traditional monadic analyses be forgone.

The overriding goal of this coding scheme, however, is to obtain a methodology for describing interactor patterns of communication exchange. This is accomplished by using a two-message unit of analysis, combining the message control directions, and describing the transactional types that occur in an interaction.

At the dyadic level, a relatively simple interactor measure is available in the nonsequential tabulation of symmetry, complementarity, and transitory transactional types and their subcategories. This gives a potentially useful but nonetheless static description of rational communication patterns.

A more complex measure of the relational aspects of interaction is one that accounts for sequential patterning of transactional types over time. This method of describing interactor patterns moves the analysis further toward a process level, with an attempt to describe a series of transactions in terms of configuration patterns.

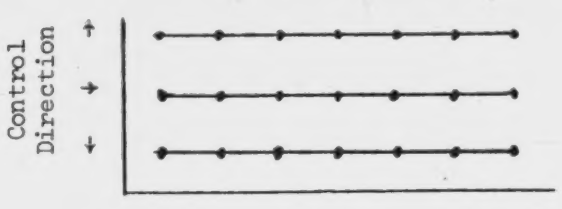
The shift from individual message units to paired-message units is a significant change in analysis level. But the movement from paired messages to transaction series is an even greater analytical

jump. It is a movement from indexing patterned regularities of the system, which has proven to be no small task, to indexing changing patterns of a system over time, which appears to be a far more formidable task.

The transactional types formulated on the basis of the present relational coding scheme can be used to describe transactional configurations, referred to as a series of homogeneous transactions or transactional patterns based on sequential sets of transactional configurations. In Figure 4, the different transactional sub-types are presented in graphic form. These are the "pure" cases of symmetry, transitory and complementary configurations.

Figure 4. A typology of transactional configurations.

Symmetry:

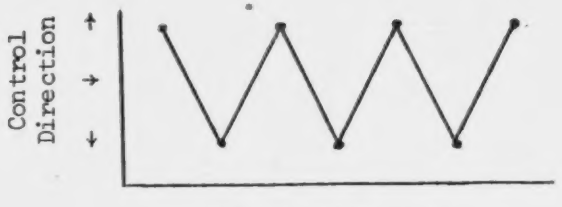


↑↑ = competitive symmetry

→→ = neutralized symmetry

↓↓ = submissive symmetry

Complementarity:



↑↓ = complementarity one-up

↓↑ = complementarity one-down

Transitory:

↑→ = one-up leveling

→↑ = leveling one-up

↓→ = one-down leveling

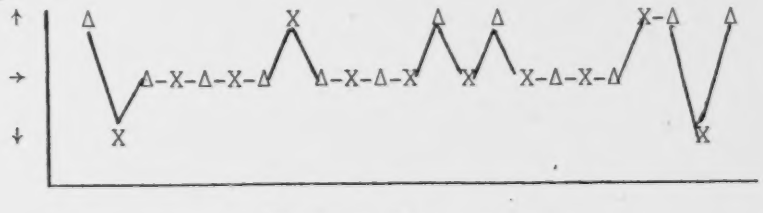
→↓ leveling one-down

Most probably, an interaction will consist of a mixture of several different types of configurations. In fact, an important dimension of relational pattern is the amount and type of mixture of transactional types.[13]

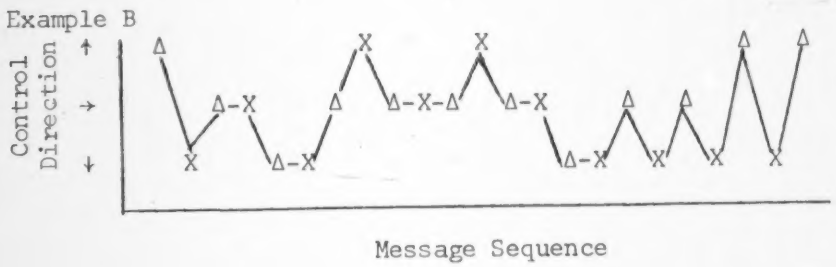
For illustration, two interaction series of husband and wife discussions are presented below in Figure 5.[14] The symbol "Δ" refers to wife and the symbol "X" refers to husband.

Figure 5. Two examples of dyadic transactional patterns over time.

Example A



Message Sequence



In Example A, there are 10 transactional configurations. They are predominantly neutralized symmetry, interspersed with movements toward one-up. This interaction, as is also shown in Example B, begins and ends with complementary exchanges. Example B has 16 transactional configurations, with transitory toward one-down the most frequent configuration. However, no one pattern clearly emerges in the example; a more varied range and style of transaction is found than occurs in Example A.

Issues in the Analysis and Extension of the Coding Procedures

The present analysis scheme rests on a two-message unit of analysis. An important methodological problem in our present research is to analyze message sequences that are longer than the basic two-message transaction.

In the examples given above, the transactional sequences were labelled by identifying the predominant transactional form. Using the typology of transactional configurations presented in Figure 4 above, we can carry this approach somewhat further. We can characterize transactions in terms of the longest occurring sequence(s), or by the most frequently occurring transactional type(s). We can compute measures of rigidity or flexibility, in terms of the number of configuration patterns used, or the "turnover" rate of pattern

usage. Finally, we can characterize transactions by the sequential orderings of configurations, in terms of which patterns tend to follow or precede other patterns. Several of these kinds of measures have been used to generate some relevant findings about relational communication in dyadic systems (see Rogers, (1972), Ericson, (1972) and Millar (1973)).

As we extend our analysis beyond the two-message transaction, the need to clearly explicate interaction patterns, based on transactional sequences of varying lengths becomes the major analytic issue. At present, our main source of pattern definition has come from the clinical-psychology literature. Pattern detection, however, must be expanded. The transactional data are amenable to analysis through Markov-chain processes, which permit us to make statements about the relative probabilities of one transactional exchange following another. This analysis may also allow us to compare dyads, or aggregates of dyads (i.e., between a sample of dyads receiving marital counseling and an equivalent sample that has not received counseling).

We are also exploring the analytic techniques in the pattern recognition area. Empirical techniques that facilitate the isolation and definition of transactional patterns are crucial to the advancement of our analysis of communication processes. As these patterns are isolated, the "language of concepts" dealing with relational control will expand and our ability to construct relationships and theories will improve.

There are two other important modifications for expansion of the present coding scheme that are underway. We are attempting to

add an intensity measure, and a more refined time dimension, to our analytical procedures. A measure of control intensity becomes important when it is recognized that messages do not necessarily reflect equal "amounts" of one-up or one-down movements. For example, an order would appear to be a stronger attempt to move one-up than would an instruction. Similarly, asking for approval might indicate a greater willingness to move one-down than would giving approval. The problem of determining the degree of differential control intensity could be approached through empirical means (perhaps ratings or paired comparisons of utterances), or through arbitrary designations of message control differences on the part of the investigator.

The additional of a time dimension to relational control analysis also is an important addition to the "richness" of information about control processes available to the investigator. In the present system, all messages are considered to represent equal time segments, yet clearly in actual interaction the utterances vary in length considerably. The methodological task of adding time as a variable would seem to be fairly straightforward; we have already begun pilot work using various methods to plot the time duration of the basic coding units.

Our expected result, then, from further research in this area, is a significantly increased "language" of relational control patterns; the patterns will be based on various sequences of relational control movements in which both intensity of movement and duration of movement are central variables.

As a concluding note to this discussion, it should be noted that extension of these coding procedures to triadic or larger

systems may also be possible. However, we have chosen to focus on the dyad thus far until these other problems are more readily tractable.

Conclusion

The development of a transactional coding scheme combines several current, mutually reinforcing, lines of theoretical concern. First, it focuses on the observable, ongoing aspects of interpersonal interaction, rather than on internal consequences. Second, it is concerned with the form, or structure, of interaction, as distinct from a concern for referent. And third, it stresses the systemic aspects of communication rather than individual behavior. A relational analysis of communication patterns involves at least a dyadic level of analysis and necessitates an emphasis on process. This approach differs significantly from most of the existing interaction analysis techniques.

With the application of the relational communication analysis, numerous interaction indices can be obtained at the monadic level, but, more importantly, indices at the system level are possible. The communication "properties" that are indexed by this coding system are: (1) the types of relational control, (2) the fluidity of relation control and (3) the configuration patterns of relational control over time.

The relational analysis presented in this paper is a continuation of earlier efforts to develop a set of transactional concepts for describing basic communication patterns. The methodology set forth not only explicates, but expands the control-defining conceptions of message-exchange, and provides procedures for operation-

alizing this transactional approach to communication. In addition we have indicated further research directions that are necessary for expanding this analytic procedure into a more robust tool for relational communication analysis.

FOOTNOTES

[1]Eliminated from consideration were systems that apply to particular types of groups, e.g., teacher-students, (Flanders, 1960; Amidon and Hough, 1967); that are highly specific in analysis, e.g., tabulating nouns, pronouns, etc., (Goldman-Eisler, 1954); that are mainly used in therapeutic setting with a heavy emphasis on inferring the psychological function of the message and/or the psychological state of the actor (Leary, 1957; Adler and Enelow, 1965) and that deal with nonverbal behavior (Rosenfield, 1966; Harrison, 1969).

[2]This scheme has been revised by Borke (1969) for use with video tape.

[3]Borke (1967) notes that in analyzing data on family interaction, the secondary mode inferences were too sparsely distributed for overall systematic comparisons (p. 19).

[4]Borgatta's (1961) revision of Bales IPA extends the original classification codes to 18 in an effort to specify the code categories more clearly.

[5]Soskin and John note that, from the coder's point of view, the structural analysis is practically inference free, the functional analysis involves more inference, and the dynamic analysis is quite inferential.

[6]See Erving Goffman, pp. 63-64 of "The Nature of Deference and Demeanor" in Interaction Ritual (1967).

[7]Watzlawick and Beavin (1967) point out that if a sequence of messages between A and B is broken down into statements about A separately from B, an intrapersonal or individual explanation of communication behavior results. A quasi-interactional explanation results from a comparison of A with B. But a truly interactional explanation results only when the measurement is based on the sequentially ordered interpretation of a series of at least two-message units.

[8]For a critical discussion of Mark's coding scheme, see Ericson (1972).

[9]For example, the relation-defining aspect of communication is illustrated when one interactor (A) issues an imperative and the other (B) grants control by complying. Compliance by B confirms the one-up definition proposed by A, and the complementarity of the transaction. If B's response is noncompliant, B is denying A's definition of being in control. If B responds with a counter imperative, B has defined the relationship at that moment in that given exchange as symmetrical.

[10]Periods of silence and laughter are indicated by a second and third digit code of 00 and 99 respectively.

[11]The operationalization of one-up and one-down control movements, which form the basis of symmetrical and complementary transaction patterns, has been a central concern. These movements, however, refer to maximal differences in relational control. Acceptance of control confirms the definition offered and rejection of control refutes the definition. These polarities, as significant as they are, do not provide a way for taking into account less extreme modifying responses to the role definitions offered. In the development of the present scheme, a neutralizing direction of relational control was incorporated to refer to communicative behaviors that redefine the relationship, but in more moderate terms than total acceptance or rejection. With a third control direction, another general transactional type for describing relational communication is added. The three major transactional types, which will be described in the next section, refer to paired messages that are similar in their control directions (symmetrical), of a mixed control nature with one message being neutral (transitional), or maximally dissimilar in their control directions (complementary).

[12]Note that a message is both a response to what precedes it and a stimulus for the message that follows. If the response interpretation is categorically different from the stimulus interpretation, two sets of second and third digit codes are used to describe the message, and two control directions are identified in accordance with the coding rules.

[13]See Millar (1973) for the specification of two types of fludity measures based on the relational communication analysis presented in this paper.

[14]These examples come from Rogers' (1972) research on marital strain and communication patterns.

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